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09/443,793	11/18/1999	DAVID E. ALBRECHT	505-02	7726

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EXAMINER

PICKARD, ALISON K

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 04/20/2005

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APR 20 2005

**GROUP 3600**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/443,793  
Filing Date: November 18, 1999  
Appellant(s): ALBRECHT, DAVID E.

\_\_\_\_\_  
William H. Eilberg, Esq.  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 1-25-05 appealing from the Office action  
mailed 6-7-04.

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**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal. The references were cited on page 4 of the Final Office Action mailed 11-5-03 to provide evidence of known use of an orifice to communicate fluid pressure to a seal.

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397,981	HAGGETT	2-1889
2,610,651	HAHN	9-1952

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith in view of Jones (2,278,721).

Smith discloses a one-piece plate 31 having an interior opening (near line 32) and a boundary (near line 33 in Figure 2). A one-piece seal 36 is disposed within the boundary. A support ring 22 is disposed within the seal 36. The seal 36 is a flexible O-ring. The support ring 22 is metal and is non-threaded. The ring 22 has an outer boundary with two chamfers 24. A fluid component (13) abuts the plate. The plate is generally planar and also has a pair of surfaces, which are parallel to each other (i.e. the surfaces parallel to the flange surfaces of 13). Smith does not disclose that the support ring has at least one orifice providing fluid connection between the opening and the seal. Jones teaches a seal between two port faces (of items 4 and 1, seen best in Figures 2 and 3). The seal comprises a support ring 38 disposed within a seal 46. Jones teaches using an orifice 39 to provide a fluid connection between the opening (i.e. inner circumference of the ring 38) and the seal 46 to ensure a fluid tight seal. The orifice allows fluid pressure to press the seal upward, outward, and downward into fluid sealing abutment with the surfaces of the joint (see page 2, line 73 through page 3, line 10). (Note: the seal of Jones is oriented between two surfaces similar to those of Smith. The orifices of Jones are arranged generally parallel to these surfaces and would be arranged parallel to the surfaces of Smith.) Therefore, it would have been obvious for one of ordinary skill in the art at the time the

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invention was made to modify the support ring of Smith with the orifices taught by Jones so that fluid pressure within the opening is communicated to the seal to force it into fluid tight sealing engagement and prevent leakage through the joint.

Regarding claims 31 and 35, Smith discloses two chamfers 24 at an angle with the axis of the support ring. However, Smith does not disclose that the angle is about 45 degrees. It is not considered inventive to discover the workable or optimum ranges by routine experimentation. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the chamfer at an angle of 45 degrees.

#### **(10) Response to Argument**

##### Claims 28 and 32

Appellant argues that Smith lacks a “one-piece plate” for two reasons. Regarding Appellant’s first argument that ring 31 of Smith is not a “plate,” the examiner disagrees. First, neither the claims nor the disclosure provide any definition or limitations that would distinguish Appellant’s “plate” from that seen in Smith (ring 31). Further, Appellant’s definition provided on page 8, lines 16-17 of the Appeal Brief is met by Smith’s ring (31). As seen best in the cross-section of Figure 1, ring 31 is “a generally flat member,” thus is a “plate” as required by the claims. Appellant also argues that Smith teaches a two-piece plate and it is error to apply some teachings of Smith while disregarding others. This argument is unpersuasive. As clearly seen in at least Figure 2 of Smith, item 31 is one-piece. Locator 41 of Smith is an additional piece. The examiner has never identified both the ring 31 and locator 41 as the “plate” required by the claims. Therefore, the argument that the ring and locator are two pieces rather than the required

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“one-piece” is moot and unpersuasive. There is no need to refer to locator 41 because ring 31 already meets all the limitations of the “one-piece plate” required by the claims. Further, because of the word “comprising” used in line 2 of claims 28 and 31, the claims are considered “open” claims. Therefore, the references applied can have additional structure not required by the claims.

Appellant argues that Jones has been improperly applied. The examiner disagrees.

First, the geometry of Jones does match the present invention. As seen best in Figures 2 and 3, Jones teaches a fluid seal between port faces. A support ring 38 and annular seal 46 are disposed between faces of bonnet 4 and casing 1. While there is fluid flow in passages 2 and 3, there is also fluid flow in the cavity between 4 and 1 (i.e. where stem 7 is). The cavity (and thus seal) is subjected to a test pressure (e.g., see page 2, lines 65-72). The openings 39 in the support ring communicate this “fluid” (pressure) from the cavity to the seal 46. The seal is then pressed “upwardly, outwardly, and downwardly into fluid sealing abutment” with the adjacent surfaces (see page 3, lines 1-4). It is this teaching that is being applied to Smith. The arrangement of the orifices of Jones are “generally parallel” to the port faces of items 1 and 4. Thus, when Smith is modified with Jones’s teachings, the orifices would be “generally parallel” to the plate surfaces of Smith, which are parallel to the port faces.

In response to Appellant's argument that the reference fails to show certain features of Appellant's invention, it is noted that the features upon which Appellant relies (i.e., fluid flow in the orifices is perpendicular to the flow of fluid between components) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26

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USPQ2d 1057 (Fed. Cir. 1993). However, as clearly seen in Figures 2 and 3 of Jones, the flow through the orifices of Jones is perpendicular to the fluid flow in the cavity formed by items 1 and 4.

Appellant argues that Jones addresses a problem different than that solved by the present invention. The examiner disagrees. Appellant's invention, Smith, and Jones each relate to a fluid seal between separate mating components. As stated above, Jones specifically teaches using orifices in the support ring of the seal to communicate fluid from inside the mating components with an annular seal adjacent the support ring to ensure a fluid tight seal between the mating components. This teaching would provide motivation for one of ordinary skill in the art seeking to achieve a fluid tight seal to use such orifices.

In response to Appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, an apparatus having a planar, one-piece plate with an annular seal and support ring within its opening is known, as evidenced by Smith. The use of orifices in a support ring to communicate fluid to an adjacent seal is known, as evidenced by Jones. Note: Haggett and Hahn were also cited as evidence in page 4 of the Final Office Action mailed 11-5-03. Both references teach the use of an orifice to communicate fluid pressure to a sealing ring to urge the sealing ring into fluid tight engagement with mating surfaces. Thus, one

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of ordinary skill in the art would have the knowledge and motivation of the claimed limitations at the time the invention was made. Appellant further submits that the age of the references is evidence of unobviousness. The age of the reference does not matter and is not persuasive of unobviousness. See *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977).

#### Claims 29 and 33

Appellant argues that Jones teaches a U-shaped seal and not an O-ring. This argument is unpersuasive. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Smith already discloses an O-ring. Jones is being applied for its teaching of the orifices. However, it should be noted that Jones only uses the U-shaped gasket as an example. Jones states that “any gasket” capable of forming a pressure-tight seal can be used (see page 2, lines 18-24).

For the above reasons, it is believed that the rejections should be sustained.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.



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Respectfully submitted,

  
Alison K. Pickard

Primary Examiner

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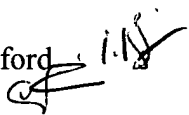
AP

April 18, 2005

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